DOCUMENT RESUME

ED 267 393 CS 008 377

AUTHOR Duane, Rita M.
TITLE A Study of Tenth and Eleventh Grade Students Who Failed the New Jersey Minimum Basic Skills Test in Reading.
PUB DATE Apr 86
NOTE 33p.; M.A. Thesis, Kean College of New Jersey.
PUB TYPE Reports - Research/Technical (143) -- Dissertations/Theses - Master Theses (042)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Age; Grade 10; Grade 11; Graduation Requirements; High Schools; High School Students; Intelligence Quotient; *Minimum Competency Testing; *Performance Factors; *Reading Achievement; Remedial Reading; Sex Differences
IDENTIFIERS Handedness; New Jersey

ABSTRACT

A study examined the characteristics that might be shared among tenth and eleventh grade students who fail the "New Jersey Minimum Basic Skills Test" (MBS) in reading. The scores of 15 students in the graduating classes of 1986 and 1987 who had failed to attain the minimum score of 75 prior to remedial instruction were studied. The characteristics of these students were compared with those of the entire graduating class, and the test scores of the remediated students were compared with the grades they received in their Developmental English classes. Sex, IQ, ages at school entrance, ethnicity, handedness, and grades received in remedial classes were all studied as possible factors. No significant relationship was found for sex, age at school entrance, or handedness. A low to moderate correlation of IQ and test scores was obtained, but the range of IQs in the Minimum Basic Skills group appears to identify potential failures. A significant relationship between ethnic groups and test scores was indicated, while a comparison of MBS scores and grades in remedial classes yielded a moderate correlation. The results indicated that black students with IQs of less than 100 who perform poorly in remedial classes will continue to be candidates for failure on the High School Proficiency Test, slated to be the graduation standard for 1989. There was no indication that literature-based remediation should be abandoned in favor of strict skills orientation. (HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

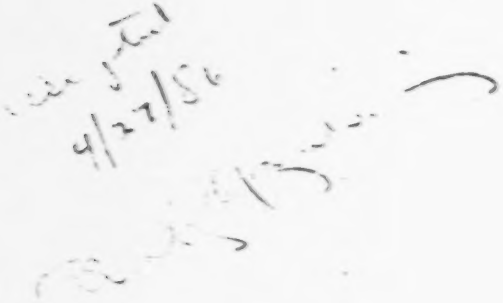
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED267393

A STUDY OF TENTH AND ELEVENTH GRADE STUDENTS WHO FAILED THE NEW JERSEY MINIMUM BASIC SKILLS TEST IN READING

BY
RITA M. DUANE



Submitted in Partial Fulfillment
of the requirements of the
Master of Arts Degree in Reading Specialization

Kean College of New Jersey
April 1986

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Rita M. Duane

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CS 008 377

ABSTRACT

The purpose of this study of tenth and eleventh grade students in a large urban-suburban school district was to examine the characteristics which might identify the students who fail the New Jersey Minimum Basic Skills Test in Reading. Sex, IQ, age at school entrance, ethnicity, handedness and grades received in remedial classes were studied as possible factors. A significant relationship between ethnic group and test scores was indicated while a comparison of MBS scores and grades in remedial classes yielded a moderate correlation. A low to moderate correlation of IQ and test scores was obtained but the range of IQs in the MBS group appears to identify potential failures. No significant relationship was found for sex, age, at school entrance or handedness.

TABLE OF CONTENTS

	Page
Abstract	i
LIST OF FIGURES	iii
LIST OF TABLES	iv
STUDY OF STUDENTS WHO FAILED THE NEW JERSEY MINIMUM BASIC SKILLS TEST	
Introduction	1
Hypothesis	3
Limitations and Deliminations	4
Procedures	4
Conclusions and Implications	10
MIMIMUM COMPETENCY TESTING: RELATED RESEARCH	13
REFERENCES	21
APPENDICES	24

LIST OF FIGURES

FIGURE

1. Scattergram of Ages at School Entrance and MBS Scores 8

LIST OF TABLES

Table		Page
1.	School Population Distribution by Sex	7
2.	School Population Distributed by IQ	7
3.	An Analysis of Ethnic Groups in Total and MBS Population	8
4.	Handedness in MBS Students Compared with a Sample Group	9

Beginning with the class of 1985, the New Jersey State Department of Education mandated a minimum competency in reading as one of the requirements for high school graduation. Thus New Jersey joined fourteen other states which have this proficiency in place. Linda Gambrell who chaired the International Reading Association Committee on Minimum Competency and Reading reported (1985) that 29 of the 50 states require minimum competency testing in reading and that the majority of these have or will establish diploma requirements based on these tests.

In New Jersey, minimum reading competency is currently measured by the Minimum Basic Skills Test (MBS). Spring 1986 will mark the introduction of the High School Proficiency Test (HSPT) slated to be the graduation standard for the class of 1989. Current ninth graders will be tested and those who do not meet a yet-to-be determined score will have three additional opportunities for re-testing. Concern has been expressed about the effects of competency testing on minority students. Ronald Lewis at the meeting of the National Council of Measurement in Education (1979) spoke out against "...potential organization resegregation."

Compensatory education (SCE) has been the vehicle for raising the reading scores of students who fail the MBS. Students who fall below the cut-off score (75) are assigned

to classes of 15 or fewer students along with other students who have not met the local district reading criteria. The instructional emphasis is on basic skills, reading appreciation and practical English. These classes are taught by secondary English teachers who may or may not have training in the teaching of reading and/or teacher of reading certification. Jensen (1985) reports that after twenty years of compensatory education, there has been no impact on those variables it was intended to and expected to improve, namely IQ and scholastic achievement.

Then how should the problem of failures on minimum competency and proficiency tests in reading be addressed? Walstad (1985) studied the impact of variables such as school policy, district resources and student characteristics in Missouri public schools. He found that pre-testing of students was the only factor having a significant effect on performance. Ornstein and Levine (1981) reported that high school compensatory programs emphasizing structured learning and basic skills can help improve instruction. They based this conclusion on research by Cookson who also concluded that more funds will have to be expended than are now available.

The unanswered questions remain, however. Who are the students who will fail the MBS test? How can future potential failures be identified before Grade 9? What relationship is there between the grades received in compensatory classes and the likelihood that the student will eventually

pass the minimum competency standard? If distinctive characteristics such as sex, IQ, handedness, ethnicity, can be identified prior to grade 9, intensive remediation could be implemented before the first administration of the HSTP. Since grades in present compensatory classes are not indicators of success or failure in the MBS, an individualized program of instruction, prepared after a diagnostic study by a Reading Specialist, should be instituted. This prescriptive instruction should be carried out by a reading specialist. The consequences of failure to attain reading competency by grade twelve are doubly serious. Not only will the high school diploma be withheld but the student will also enter the adult world lacking the literacy skills to function as an informed and productive citizen. Thus it is essential that high school administrators focus full attention on the up-grading of reading programs.

Hypothesis

Students who fail to meet the minimum standards on the New Jersey Minimum Basic Skills Test present distinctive characteristics - sex, IQ, age at school entrance, handedness and ethnicity - and could be identified prior to Grade 9. The grades achieved in present compensatory classes have no predictive value as to who will eventually meet minimum standards.

Limitations and Delimitations

The IQ used in this study will be the one most recently reported on the student's permanent record. The particular test and the year of administration will vary. The study will apply only to the population of one school district.

PROCEDURES

In an attempt to learn more about the characteristics of low scoring high school students and the efficiency of the remedial program, an examination of the results of the 1985 New Jersey Basic Skills Testing was made. Specifically, the scores of students in the graduating classes of 1986 and 1987 from an urban-suburban school district were studied. It should be noted here that these were students who had failed to attain the minimum score of 75 in Reading in the 1983-1984 testing and had been undergoing remediation in classes termed Developmental English. The characteristics of these students were compared with those of the entire graduating class. Finally the test scores of the remediated students were compared with the grades they received in their Developmental English classes.

For the first part of the study, the permanent record cards of the 20 juniors and 33 sophomores who were re-tested in March 1985 were studied. Sex, IQ and age at school entrance were recorded for each student. To obtain data on racial background and handedness, the students' English

teachers were surveyed. They were asked to observe handedness in written work, to verify this in conversation with the student and to classify each student as 1) Caucasian 2) Black 3) Puerto Rican or 7) Asian. A distribution of this data was made.

By using the school's computer, data about the entire tenth and eleventh grade classes were obtained. The total number of males and females, the median IQs, the range of IQs and the breakdown of racial groups for the 570 sophomores and 484 juniors were listed. (It must be noted here that when these two classes were tested initially in Grade nine, 92% of the Class of '87 and 90% of the Class of '86 passed the MBS test. Subsequent re-testing and the elimination of the testing requirement for English as a Second Language and Classified students further reduced the remedial group to the numbers previously noted.) A random sample of 100 students was taken to determine handedness.

Data from the remedial group were correlated with the data from the entire class in all areas except handedness which was compared with the random sample. The findings were then evaluated to determine if any of the characteristics studied would make possible the earlier identification of students who would fail the MBS test.

Of the 20 juniors and 33 sophomores tested in March 1985, 7 juniors and 8 sophomores failed to attain the passing grade of 75. For each student in the remedial group of 53 tested, the grade average of two trimesters of remediation

was obtained from the Permanent Record file. A comparison of the "passed" and "failed" group on each grade level was made to determine whether there was any relationship between the remedial grades and success or failure on the test. Finally all the previously mentioned data, (sex, IQ etc.) were studied to see if there were any observable differences. Since those students who failed in 1985 will be re-tested in 1986, this study can be continued to determine whether any factors appear to be significant.

RESULTS

The data obtained by examining statistics for the Classes of 1986 and for MBS students in these classes yielded information concerning each of the factors studied. Each of these factors, sex, IQ etc., was examined separately and no attempt was made to study the inter-relationships of the separate factors.

SEX: Table 1. shows the distribution of the school population by sex. males represented 52.09% of the students and females 47.91%. However in the MBS group, the percentage of males was 66.0 and females 34.0

Table 1.
School Population Distribution by Sex

Group	MALE NO.	%	FEMALE NO.	%	TOTAL
Class of'86-all	261	53.9	223	46.1	484
MBS-all	13	65.0	7	35.0	20
MBS-failed	2	28.6	5	71.4	7
Class of '87-all	288	50.5	282	49.5	570
MBS-all	22	66.7	11	33.3	33
MBS-failed	5	62.5	3	37.5	8
'86-'87 all	549	52.1	505	47.9	1054
MBS-all	35	66.0	18	34.0	53
MBS-failed	7	46.7	8	53.3	15

It should be noted that while females represented only 34% of the MBS group, they accounted for 53% of those who failed the test after remediation.

IQ: Table 2 presents the distribution of IQ's as obtained from the school computer and from the permanent record cards of MBS students.

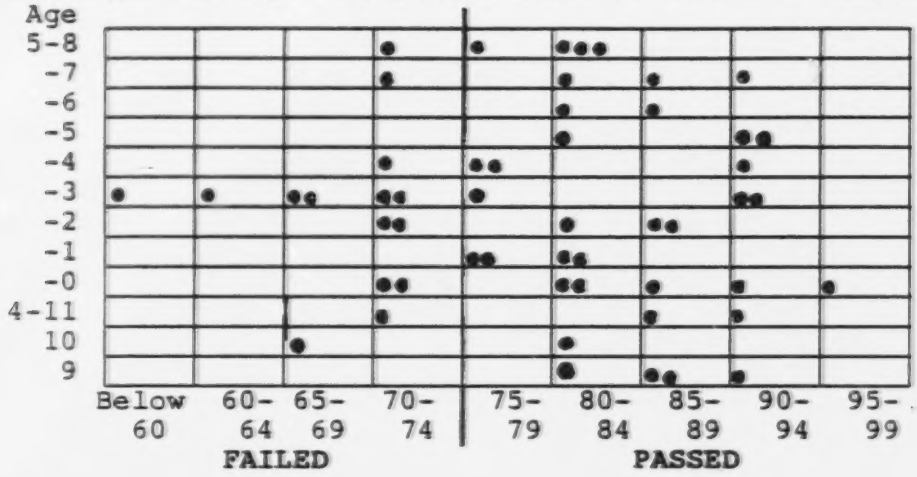
Table 2.
School Population Distributed by IQ

Group	Range of IQ	MEDIAN
Class of '86-all	64 - 142	107
MBS-all	73 - 99	83
MBS-failed	75 - 90	82.5
Class of '87-all	70 - 138	106
MBS-all	81 - 116	91
MBS-failed	85 - 101	88

Correlation of the IQ and MBS score by the Pearson Product Moment method yielded a negligible correlation of .18 for the Class of '86 MBS and .23 for the Class of '87 MBS.

AGE AT SCHOOL ENTRANCE: School entrance ages in years and months were plotted in the following figure with scores obtained on the MBS. A negligible pattern of correlation is observable:

Figure 1.
Scattergram of Ages at School entrance and MBS scores



ETHNICITY: Table 3 lists a breakdown of students by racial groups. Data for the entire group was taken from the school computer. Information about the MBS group was from teacher observation.

Table 3.
An Analysis of Ethnic Groups in Total and MBS Population

	Code 1 Caucasian		Code 2 Black		Code 3 Puerto Rican		Code 4 Asian		Total
	NO.	%	NO.	%	NO.	%	NO.	%	
Class of '86	408	84.3	57	11.8	3	.6	16	3.3	484
MBS-all	10	50.	8	40.	1	5.	1	5.	20
MBS-failed	2	28.6	4	57.1	1	14.3	0		7
Class of '87	500	87.7	60	10.5	6	1.1	4	.7	570
MBS-all	19	57.6	13	39.4	0	.0	1	3.0	33
MBS-failed	2	25.	6	75.	0	.0	0	.0	8
Total '86-'87	908	86.1	117	11.1	9	.9	20	1.9	1054
MBS-all	29	54.7	21	39.6	1	1.9	2	3.8	53
MBS-failed	4	26.7	10	66.7	1	6.7	0		15

Comparing ethnic groups to MBS test scores using the Chi Square test yielded a relationship of 21.67 which was significant at the .01 level with 9 degrees of freedom.

HANDEDNESS: Comparing the MBS students with a random sample of 100 eleventh and twelth grade students yielded the data on Table 4. The MBS students show a preponderance of right handed individuals among both males and females. This is equally true of the random student sample although the incidence of left handedness in the sample, larger than for males in the general population, bears further investiation.

Table 4
Handedness in MBS Students Compared with a Sample Group

	Right Handed		Left Handed		Total
	NO.	%	NO.	%	
Male-samples	36	69.2	16	30.8	52
MBS-all	31	86.1	5	13.9	36
MBS-failed	6	85.7	1	15.3	7
Female samples	38	79.2	10	20.8	48
MBS-ALL	13	76.5	4	23.5	17
MBS-failed	5	62.5	3	37.5	8
Total sample	74	74.	26	26.	100
MBS-all	44	83.	9	17.	53
MBS-failed	11	73.3	4	26.7	15

REMEDIATION: Students' grades achieved in two trimesters of remediation were added and correlated by Pearson Product moment method with scores on the MBS test. For the class of '86 a positive correlation of .60 was found. The correlation for the class of '87 was .50. Both figures fall in the high range of a moderate relationship.

CONCLUSIONS AND IMPLICATIONS

An examination of all the factors studied fails to present a clear picture of just which student will fail the MBS test at the ninth grade level. Several factors, however, seem worthy of attention as indicators in identifying potential failures. These same factors seem to relate positively to those students who will fail again after remediation.

SEX: In the failed group, male students predominate. They represent 66.7% of the remedial group. However, after two trimesters of remediation, males represent only 46.7% of the failed group.

IQ: The correlation between IQ and test performance was negligible (.18) for the class of '86 and low (.23) for the class of '87. However, only 3 of 45 MBS students for whom IQs were available had IQs above 100. In the Class of '87, the median IQ of MBS students was 24 points lower than that of the entire class. The median IQ of the MBS students of the Class of '87 was 15 points below that of the entire class. The median IQ of the group who failed after remediation was not significantly different from that of the entire MBS group.

AGE AT SCHOOL ENTRANCE: No relationship to the MBS group was observed.

ETHNICITY: This the area where a statistical relationship was established. Black students, 11.1% of the Classes

of '86 and '87, comprise 39.6% of the MBS group and 66.7% of the group who failed after remediation. The application of the Cki Square Test shows that there is a significant relationship between MBS scores and ethnicity. It is not chance that there are more black students in the MBS group.

HANDEDNESS: No relationship is evident. However no attempt was made to determine whether the students who identified themselves as right or left handed in writing might have mixed dominance involving hand, foot and eye.

REMEDIATION: The literature based program of remediation was perceived as having little relationship to the MBS test. However, a positive relationship at the high end of the moderate range was established. Of the 20 students who achieved a total grade of 4 or 5 (the equivalent or 2 B's or a B and a C) only 3 failed to pass the test. Students who were given a total grade of 8 (the equivalent of 2 D's) failed the test in a ratio of 7 to 4.

IMPLICATIONS: With the implementation of the new, more difficult High School Proficiency Test, the profile of the student who has failed the MBS at the Grade 9 level should continue to identify the students who will attain the lowest scores. The black student with an IQ of less than 100 who performs poorly in remedial classes will continue to be a candidate for failure in the HSTP program. There is no indication that literature based remediation needs to be abandoned in favor of a strict skills orientation.

The raw data of this study with the exception of the

statistics on handedness are available in the school files, but have never been analyzed in depth. Statistical data have been provided by the state about the overall performance of the district but the individual human factors have been largely unexplored. The MBS program will be phased out with the Class of '88, but it will leave behind a body of information covering an eleven year history of testing. This would seem to be a mine of information for a researcher interested in the progress of reading measurement in a large school district.

MINIMUM COMPETENCY TESTING:
RELATED RESEARCH

Although minimum competency testing is newsworthy in the 1980's it is not new to the American educational scene. Holbrook (1982) dates the competency testing movement to the 1840's when Boston public schools instituted a common examination as a requirement for attaining a high school diploma. In 1877 New York established a "suitable standard for graduation" test. The current trend is a development of the 1970's and is attributed to a general concern for the dramatic drop in Scholastic Aptitude Test scores throughout the country.

Fox and Beezer (1978) see the mandated testing movement as a means of promoting teacher accountability. In their study done in the fall of 1977, 20 states reported using some measure of evaluating reading achievements. The states identify their purpose for conducting such programs as 1) evaluation of their reading instruction program or 2) evaluation of the individual student's reading abilities and needs. Testing at the secondary level was primarily designed to measure the ability of these pupils to read at a level which would enable them to participate in society. Maryland, Florida, North Carolina and Tennessee were cited as having programs in this area.

Similary Pipho (1978) examined the minimum competency testing movement and noted that in the three year period

(1975-1978) such testing has swept the United States. As of March 15, 1978, 33 states had taken some steps toward setting minimum reading standards for elementary and secondary schools. All of the remaining states had either pending legislation or state board of education plans in the offing. Significantly, he states, this movement is being led, or pushed, by non-educators. In the most part, midwestern states (Nebraska for example) have not passed state wide mandates unless considerable local control could be exerted. Where strong state control had already existed, the resultant competency standards are consistent with past policies of strong state control.

Chall in her 1978 study reported that while 42 of 46 responding states were planning to implement competency testing, only two states replied as to what they were planning to do with students who failed to achieve minimum scores. A later survey by the International Reading Association's Minimum Competency Program and Reading Comittee (Gambrell, 1985) brought out the heartening information that of 29 states involved in minimum competency reading testing, 22 require remedial programs for those not meeting standards. Forty percent of these states have curriculum guides for remediation, almost 70% have provisions for evaluation but only about half of these states have written objectives for their programs. Only fifteen states link competency to graduation.

Four states have published extensive data on their competency programs which have interesting implications. These

are Missouri, Ohio, Texas and New Jersey. Each offers a different insight into the implications of such testing on educational programs.

The Ohio State Department of Education adopted Minimum Standards for Elementary and Secondary Schools effective September 1, 1983. As part of this program, secondary schools are required to schedule time for reading instruction. The impetus for inaugurating secondary programs was the conclusion in the 1979-80 reading and literature assessment conducted by the National Assessment of Educational Progress that the majority of secondary students could not go beyond initial comprehension to extend and defend their reading of text. (Secondary Reading, 1983)

To meet the state mandate, seventh and eighth grade students not assigned to foreign language classes must be scheduled into reading instruction. Furthermore, separately organized classes in reading are required for high school students so that each student has 60 hours (1/2 unit) among the 45 units required for graduation. These instructional programs range from accelerated classes emphasizing enrichment and critical reading/thinking skills through developmental, adaptive and corrective classes. Provision is also made for individualized remedial instruction. (Secondary Reading, 1983).

The Ohio Board stresses the philosophy that competency based on education is not a testing system for categorizing students but must include instructional objectives, a variety

of means for assessment and instructional support for both pupils and teachers. Although the state is charting the direction of the program, the board espouses a policy of local control and management of day-to-day decisions.

Research in the state of Missouri looks at competency testing from a different perspective. Walsted (1984), pointing out the need for research on the impact of MCT programs, studied an existing program to determine the impact of school resources and policy changes on the basic skills of students. Data from the testing program as well as surveys from district superintendents were used to test whether changes in a district's curricula, testing program or teacher training influenced the number of students passing the minimum standard.

The Model used for the study presumed that achievement in a school district is a function of the family background of the students, the resources of the school system, and student labor time applied to education. The assessment instrument was the Missouri Department of Elementary and Secondary Education Basic Essential Skills Test (BEST). The BEST is a diagnostic tool and not a requirement for high school graduation. Walsted reported that, while the BEST resulted in many changes in the educational practices of the districts, not all the changes were effective. The single factor that increased the level of basic skills scores by a sizable amount was pre-testing. He surmises that perhaps the establishment of a pre-test program convinced both

pupils and teachers of the state's committment to success in test performance. Regardless of the reason, pre-testing alone predicted satisfactory outcomes.

The experience of the Austin Indepentent School District, Texas, (A. D) provides a look at a program which requires minimum competency in reading as a graduation requirement.

During 1976, the Austin Board of Education set eighth grade level of reading competency as the graduation standard. This standard was enforced for the first time in 1979. The following year the level was raised to ninth grade with implementation set for 1983. Both the Iowa and the STEP tests were used as assessment instruments. In the 1984-85 school year the Texas Assessment of Basic Skills (TABS) became the sole measure of competency.

Students who fail to meet standards are required to enroll in at least one tutorial program before signing a waiver letter acknowledging that they do not have the required reading proficiency. Comparisions of the growth accomplished in the tutorial programs in the past eight years are difficult since the assessment measures employed are not equivalent. However, a higher percentage of seniors has demonstrated competency at or above the 8.5 grade level every year since the inception of the program. In addition, since higher requirements were adopted in 1981-82, a higher percentage of seniors has demonstrated competency at the 9th grade level. Ninety one percent of all graduates between

Some characteristics of students unable to meet minimums were noted. Fifty one percent were females. Ethnically, 43% were black, 29% Hispanic and 28% were Anglo or other. The students averaged half a year older than their classmates.

Some difficulties are anticipated because the Texas State Department has mandated minimum competency for 1986-87 graduates. At the present time, the state standard is lower than the Austin requirement. Adjustment of the raw score requirement must be made if Austin is to avoid contradicting the state regulation.

Like Texas, New Jersey has a competency program that is in a state of transition. The New Jersey Minimum Basic Skills Test is being phased out as a graduation standard and will be replaced in 1989 with the High School Proficiency Test. Chapter 97 of the New Jersey Public Laws of 1976 established the uniform statewide proficiency standards in communication and computation, complying with the Public School Education Act of 1975. It became immediately apparent that there was a wide diversity between the test results of students from urban areas and those from other types of communities. (Koffler, 1978). With each succeeding year, the percentage of students meeting minimum standards at all grade levels has increased with many districts showing 100% success. Madaus (1985) reports that the New Jersey Department of Education admits that New Jersey teachers teach to the test and that the state department provides districts

with copies of previous tests for this purpose. He points out that this is reverting to 19th Century Utilitarianism and quotes from an essay of H.G. Wells written almost a century ago. "The examiner pipes," Wells wrote, "and the teacher must dance - and the examiner sticks to the old tune. If the educational reformers really wish the dance altered, they must turn their attention from the dancers to the musicians." (Madaus, p.617)

In the 1985 report of the New Jersey Department of Education, data is presented covering the eight years the MBS testing program has been in place. Reading scores have risen from a base of 76.3% meeting the state standard to 92.65 achieving the cut-off score in 1985. No attempt is made, however, to explain how this improvement has been achieved. Recommendations for improving overall performance emphasize staff development and the identification and application of reading skills in the content areas. No evaluation of current compensatory education classes was included.

The April 1985 issue of Phi Delta Kappan celebrated the Twentieth Anniversary of Compensatory Education. Virginia Plunkett points out in this issue that the achievement gap for disadvantaged children has not been closed, only narrowed. The prevailing mood of the issue is pessimistic; anticipated gains have not been made. Plunkett emphasizes the importance of convincing Congress the funds must continue to be expended, that there is a pressing need to invest in human capital, the present generation of American school children.

CONCLUSIONS

The computer era has facilitated mass testing programs and has simplified the presentation of reams of date analyzing the results. Walsted's study in Missouri was of such magnitude that his finding that test results are improved only by pre-testing is an important contribution to the understanding of competency testing. If the measuring of basic skills, is the end in itself, rather than the acquisition of the skills, then much of what is known about good educational practice will also have to be questioned.

However, experience in Missouri, Ohio, Texas and New Jersey demonstrated that when standards are set, concerted efforts will be made to meet these standards. There is no evidence that students will simply "drop-out" rather than continue in their efforts to meet state requirements. The up-grading of the high school diploma is the anticipated result of the rising standards for literacy. More information is needed on the particular characteristics of the low-scoring high school student and more research must be done on programs to remediate the disabilities such a student presents.

REFERENCE

B I B L I O G R A P H Y

Chall, Jeanne. "Minimum Competency in Reading, An Informal Survry of the States," Phi Delta Kappan 60 (January 1979): 351-352.

Gambrell, Linda B. Minimum Compentency Testing and Programs in Reading: A Survey of the United States," Journal of Reading 28 (May 1985): 735-738.

Fox, Barbara J. and Bruce G. Breezer. "State Mandated Assessment: What's Happening in Reading?," Journal of Reading 22 (October 1978): 33-39.

Holbrook, Hilary Taylor. "ERIC/RCS Report: Minimum Competency Testing: The Dust Begins to Settle," English Journal 71 (January 1982): 34-38.

Jensen, Arthur R. "Compensatory Education and the Theory of Intelligence," Phi Delta Kappan 66 (April 1985): 554-558.

Koffler, Stephen L. New Jersey Statewide Minimum Standards: Results of Program's Second Year. Occasional Papers in Education. Bethesda, MD:ERIC Document Reproduction Service, ED 170 338. 1978.

Koffler, Stephen L. and Tina Bernstein, eds. New Jersey Statewide Minimum Basic Skills Testing Program 1979-80 State Report: Analysis and Implications. Trenton, NJ: New Jersey State Dept. of Education, 1980.

Kohlfeld, Barbara Capshaw. "An Analysis of Opinions Concerning Minimum Competency Testing," Education 105 (Fall/1984): 53-57.

Madaus, George F. "Test Scores as Administrative Mechanisms," Phi Delta Kappan 66 (May 1985): 611-617.

Minimum Competency for Graduation, Austin Independent School District, 1983-84. High School Graduation Minimum Competency Requirements, Final Report. Bethesda, MD: ERIC Document Reproduction Service, ED 252 591. 1984.

New Jersey State Department of Education. New Jersey Statewide Testing System, Minimum Basic Skills Test 1984-85. State Report: Analysis and Interpretation of State Performance for Reading and Mathematics. Trenton, New Jersey: New Jersey State Department of Education, 1985.

Ohio State Department of Education. Competency Assessment and Testing. Minimum Standards Implementation Series. Bethesda, MD: ERIC Document Reproduction Service, ED 252-940. 1983.

Secondary Reading. Minimum Standards Implementation Series. Bethesda, MD: ERIC Document Reproduction Service, ED 252-947. 1983.

Ornstein, Allen C. and Daniel U. Levine. "Compensatory Education: Can It Be Successful? What Are the Issues? " NASSP Bulletin 65 (May 1981): 1-15.

Pipho, Chris. "Minimum Competency Testing in 1979: A Look at State Standards," Phi Delta Kappan 59 (May 1978): 585-588.

Plunkett, Virginia R. L. "From Title I to Chapter 1: The Evolution of Compensatory Education," Phi Delta Kappan 66 (April 1985): 533-537.

Walsted, William B. "Analyzing Minimal Competency Test Performance," The Journal of Education Research 77 (May/June 1984): 261-266.

APPENDICES

APPENDIX A: Raw Data-Class of '86

STUDENTS	Age*	Sex	MBS	IQ	Grades	Hand.	Ethnic**
1	5-0	F	99.9	90	2-3	R	1
2	5-3	M	94.2	99	2-3	R	1
3	5-5	M	92.3	78	2-2	R	1
4	5-4	M	91.4	73	2-2	L	2
5	4-11	M	88.6	99	4-3	R	7
6	5-5	M	83.9	NA	3-3	R	2
7	5-2	M	83.9	NA	2-2	R	1
8	5-0	M	83.9	82	3-2	L	2
9	5-1	F	83.9	76	4-2	R	1
10	5-2	M	83.0	83	2-4	R	1
11	5-7	M	82.1	NA	4-4	R	1
12	5-8	M	79.3	88	4-4	R	2
13	5-1	M	75.5	94	4-3	R	1
14	5-0	F	73.7	90	3-3	L	1
15	5-0	F	73.7	80	4-4	R	2
16	5-4	F	73.7	88	3-3	R	1
17	5-3	F	72.7	75	3-2	L	2
18	5-7	F	72.7	NA	4-4	R	2
19	5-3	M	69.0	83	3-4	R	3
20	5-8	M	69.0	82	4-4	R	2

* - age in years and Months at school entrance
** - Code - 1)Caucasian 2)Back 3)Puerto Rican 7)Asian

NA - not available

APPENDIX B: Raw Data Class of '87

Students	Age*	Sex	MBS	IQ	Grades	Hand.	Ethnic**
1	4-11	M	93.2	90	3-4	L	2
2	4-9	F	91.4	100	2-2	R	1
3	5-7	M	91.4	90	3-2	R	2
4	5-0	M	91.4	111	2-2	R	1
5	5-5	F	90.5	94	3-4	R	1
6	5-3	F	90.5	NA	3-2	R	2
7	4-9	F	89.5	88	2-3	R	1
8	5-7	M	88.6	91	4-3	R	1
9	5-6	F	87.7	90	3-2	L	2
10	5-2	M	87.7	116	3-2	R	1
11	5-2	M	87.7	87	3-3	R	1
12	4-9	M	86.7	92	2-2	R	7
13	5-0	M	86.7	94	2-2	R	1
14	5-0	M	84.9	86	3-2	R	1
15	5-8	M	84.9	84	4-4	R	1
16	5-1	M	83.9	81	3-4	R	1
17	5-6	M	83.0	94	3-3	R	1
18	4-10	M	82.1	98	3-4	R	1
19	4-9	F	82.1	99	2-2	R	1
20	5-8	F	82.1	NA	3-3	R	1
21	5-8	F	80.2	92	3-4	R	2
22	5-4	M	79.3	92	3-3	R	1
23	5-3	M	79.3	97	3-4	R	2
24	5-4	M	78.3	82	4-4	R	1
25	5-1	M	77.4	NA	-3	R	2
26	4-11	F	73.7	100	3-3	R	1
27	5-2	M	72.7	96	2-2	R	2
28	5-2	M	71.8	101	3-2	R	2
29	5-3	F	67.2	88	4-4	L	2
30	5-3	F	66.2	85	4-4	R	2
31	4-10	M	66.2	88	3-4	R	2
32	5-3	M	60.6	85	4-4	R	2
33	5-3	M	48.5	NA	4-4	L	1

* - age in years and Months at school entrance
** - Code 1) Caucasian 2) Black 3) Puerto Rican 7) Asian
NA - not available